Effect of blood storage on osmotic fragility of erythrocytes of non-descript hill cattle of Arunachal Pradesh 56
M Sarkar, B C Das, D N Das, D B Mondal and *A Chatterjee*
Vartiation in sex dependent thermal fragility of RBC membrane-A mechanism 58
R P Moudgal, M Sirajudeen and *A Nasir*
Haematological and biochemical studies on pure and crossbred rabbits 60
P P Rohilla, K M Bujarubauah, G Singh and *M Kumar*
Genetic and phenotypic correlation of reproductive and productive traits in exotic and their crosses with Gaddi sheep in Himachal Pradesh 63
Umesh Singh and *N K Manuja*
Effects of varying levels of protein supplement volutary intake, nutrient utilization and water metabolism in buffalo bullocks fed wheat-straw as basal ration 65
B S Punia, S S Dahiya and *T R Chauhan*
Effect of replacing fish-meal by soybean on digestibility, protein and minerals utilization in growing piglets 68
Ashok Kumar, S Thakur, J P Srivastava and *S K Singh*
Nutritive value of shrimp waste-meal and the fly larva-meal (maggot-meal) in growing albino rats 70
O O Oduguwa, A O Fanimo, A S Onifade and *A Arije*
Comparison of different methods of sire evaluation 73
S P Tailor, A K Banergee and *S B S Yadav*
Genetic, phenotypic and environmental trends in some economic traits in Sahiwal herds 75
S K Singh, and *R Nagaracenkar*
Genetic and phenotypic correlations among birth weight, growth rate and production traits for Holstein Friesian x Sahiwal crossbreds 77
M V Dhumal, M F Siddiqui and *S K Aurdkar*
Performance evaluation of FH, FBH and FJH *inter-se* crosses 80
Triveni Dutt and *Saravana Kumar*
Genetic studies on different components of milk production efficiency in Murrah buffaloes 82
D Kumar, Harpal Singh and *C V Singh*
Factors affecting production efficiency of Jersey cows under sub-temperate Indian conditions 84
Y P Thakur and *B P Singh*
Milk yield per day of first lactation length as selection criteria for maximizing life time milk yield 87
Triveni Dutt and *V K Taneja*
Relationship between sires estimated breeding values of first lactation and lifetime traits in Murrah buffaloes 89
Triveni Dutt and *V K Taneja*
Use of Iranian screw press sesame-meal in broiler rations 91
P Farhoomand and *R Pirmohammadi*
Certain macro-and micro-minerals in prepuberal Jersey heifers in relation to soil and forage 93
Anubha Baruah, K K Baruah and *B N Bhattacharya*
Greasy fleece production and factors affecting it in Bharat Merino sheep under semi-arid climate of Rajasthan 96
A K S Tomar, B S Mehta and *Gurmej Singh*
Trends in bluetongue virus diagnostics : A review 103
Gaya Prasad, Minakshi, Yashpal Malik and *Sushila Mann*
Adaptation of infectious bursal disease virus in chicken embryo fibroblast cell culture and fine structure 110
Rajesh Kumar, R Chandra, V D Rao and *S K Shukla*
Efficacy of vaccines prepared from *P. multocida* cells grown in chemically defined media 114
S K Srivastava
A histomorphological and immunohistochemical study on the lactotrophs in pars distalis adenohypophysis of buffalo 118
Massarat Khan, R P Saigal and *R S Sethi*
Morphohistogenesis of oesophagus in fowl (*Gallus domesticus*) 121
D Verma, M R Malik, M L Parmar and *J S Taluja*
Histological studies on the exocrine portion of pancreas of the domestic duck (*Anas boschas domesticus*) 126
G Madhavi, T S Chandrasekhara Rao, D Pramod Kumar, Y Nagamalleswari and *M Sreenu*
Histological studies on the endocrine portion of pancreas of the domestick duck (*Anas boschas domesticus*) 129
G Madhavi, T S Chandrasekhara Rao, D Pramod Kumar, Y Nagamalleswari and *M Sreenu*

Disposition kinetics of ampicillin in buffalo calves 133
M Alam, N C Banerjee and *K P Yadava*
Autogenous tensor fascia lata and dermal graft for gap repair of superficial digital flexor tendon in bovines: Clinical radiological and histopathological study 136
O P Gupta, Naveen Kumar, A K Sharma, G R Singh and *N S Parihar*
Yield and potency of folli tropin extracted from pituitary glands of zebu cattle (*Bos indicus*) and water buffalo (*Bubalus bubalis*) 139
A Mehmood and *M Anwar*
Subacute exposure to inorganic mercuric chloride ($HgCl_2$) induce testicular toxicity in rats 142
N Prakash, V Ramkrishna and *Ashok Pawar*
The influence of genotype and ewe body condition on reproductive performance 146
R C Malik, N M Al-Khozam, M A Razzaque and *T A Al-Mutawa*
Seroprevalence of brucellosis in livestock and humans in Vidarbha region 149
D R Kalorey, V C Ingle and *N V Kurkure*
Clinical, virological and serological responses of sheep and goat inoculated with bluetongue virus type 2 151
D Sreenivasulu and *M V Subba Rao*
Monitoring of *Brucella* infection associated with reproductive losses using multiple serological tests in organized goat and sheep flocks 154
S V Singh, G S Agarwal, H V Batra, V K Gupta and *N Singh*
Spontaneous affections of pancreas in pigs 157
R Singh and *N S Parihar*
Comparative histochemical studies of *M. lattissimus dorsi anticus et posticus* and *M. supracoracoideus* in ducks and quails. Muscle fibre types 159
A N Ramesha, R V Prasad, K N Chandramouly and *Krishna Kakade*
Comparative histochemical studies of *M. lattissimus dorsi anticus et posticus* and *M. supracoracoideus* in ducks and quails. Percentage of fibre types 161
A N Ramesha, R V Prasad, K N Chandramouly and *Krishna Kakade*
Kinetics of intravenously administered ceftriaxone in lactating goat 163
K D Yadav, C Jayachandran, M K Singh, H N Jha and *S P Sinha*
Evaluation of polytetrafluoroethylene (PTFE) and frozen tracheal mucosa for reconstruction of artificial tendon sheath in cow calves: Clinical, radiological and histopathological study 166
Naveen Kumar, O P Gupta, G R Singh, A K Sharma and *N S Parihar*
Use of carbon fibres for the reconstruction of superficial digital flexor tendon in crossbred calves: Scanning electron microscopic study 169
Naveen Kumar, A K Sharma and *Satish Kumar*
Endocrine response of fracture healing: Radiological study 171
S B Suryawanshi, S K Maiti, G R Singh and *H C Setia*
Fertility status in crossbred heifers in relation to their steroid hormonal profiles before and after insemination 174
M Balakrishnan, M G Govindaiah, M Sreenath and *A V Rai*
Laproscopic detection of ovulation rates and pregnancy in different sheep breeds 176
B A Buchoo, N A Wani, M Z Khan and *G M Wani*
Skin blood flow during pre-and post-treadmill exercise in buffaloes 178
Parveen Kumar, S V Singh, R C Upadhyay and *Anjuli Aggarwal*
Effect of extra vitamin E supplementation on hydropericardium syndrome of chicken 180
Sanjeet Kumar, M U Kharole and *Jitender Kumar*
Productive quality of Awassi rams in Rajasthan 181
A K Dang, A Joshi, S M K Naqvi and *J P Mittal*
Time trends in estimates of genetic parameters in a White Leghorn population subjected to long-term selection 184
R N Chatterjee, B S Misra and *H N Singh*
Effect of expander-extruder processing on nutritive value of maize cobs based complete diet of buffaloes 188
G V N Reddy and *K Joji Reddy*
Effect of neem (*Azadirachta indica*) kernel-meal feeding on internal organs of layers 191
S K Gowda, S D Singh, A V Elangovan and *S V S Verma*

The effects of bentonite on egg performance of laying hens 194
F Inal, N Gulsen, B Coskun and *C Arslan*
Effect of individual and combined supplementation of vitamin E and selenium on the performance of broiler chicks fed ochratoxin - A 197
K Prakash, B Umakantha, G Devegowda, C V Gowdh and *G Krishnappa*
Evaluation of kid rearing system for meat production 200
A K Shinde, N P Singh, A R Sen and *D L Verma*
Gir crossbreeds for reproductive traits 203
W K Nagare and *M B Kulkarni*
Effect of dietary copper and molybdenum levels on animals growth 205
O P Singh and *B L Saraswat*
Efficacy of cabbage waste incorporated diet on the performance of layers 207
Kamlesh Singh and *B L Saraswat*
Udder measurements in Jersey × Red Sindhi crossbred cows 209
Santosh Kumar, S Katoch, Y P Thakur and *N K Manuja*
Fibre quality attributes of *Camelus dromedarius* 211
Banamali Yadav, B P Mishra, C Bhakat and *M S Sahani*
Chromosome manipulations in fish - A review 213
Tariq A Khan, Minal P Bhise and *W S Lakra*
Cloning of a cellulolytic gene from rumen bacteria using pUC18 vector 225
K Vijayarani, R Velmurugan, K Nachimuthu and *V D Padmanaban*
Interaction of avian adenovirus with the immune system of poultry 228
S Nandi, J P Ray, P Sarkar and *N K Maiti*
Control of ovine brucellosis in a high performing sheep flock using multiple serological testes 231
S V Singh, V K Gupta and *N Singh*
Partial purification of the *Pasteurella multocida* toxin from serotype A:12 of goat 235
Jai Sunder and *A A Kumar*
Effect of *Pasteurella multocida* toxin on vero cell culture 240
Jai Sunder and *A A Kumar*
Efficacy of antibiotic selected on the basis of sensitivity of operation theatre microflora during orthopedic surgery in dogs 243
Balroop Singh Nanhar, S N Sharma, M S Bhadwal and *D K Sharma*
Histological changes during fracture repair with hydroxypatite fibrillar collagen implants in calves 246
Vinay Kumar, A C Varshney, D N Sharma and *Mohinder Singh*
Development of ovary in Assam goat from birth to six months of age - a histomorphometrical study 248
A Kalita, G Baishya and *M Bhattacharya*
Superovulation and embryo recovery in Ongole cows using FSH or equine chorionic gonadotrophin 251
R Kasiraj, M Mutha Rao, N S Ranga Reddy, A K Mishra and *H C Pant*
Progesterone profile, ovarian response and embryo recovery in prostaglandin F_2 alpha and syncro-mate-B in combination with fIltropin treated crossbred cows 254
A Joe Arosh, K Sakhila Banu, T G Devananthan and *D Kathiresan*
Use of chelator and antioxidant in experimental lead toxicity : Effect on immune system 258
R C Patra, D Swarup and *D K Singh*
Epidemiological studies on canine parvoviral infection 261
P M Deepa, M R Saseendranath and *M Mini*
Management practices and Johne's disease incidence in goat herds 263
N Singh, S V Singh, V S Vihan and *S B Sood*
Usefulness of dot ELISA to detect canine distemper virus antigen 265
M Parthiban, T V Meenambigi, W Manohar Paul and *A Mahalinga Nainar*
In-vitro biofilm production of *Salmonella gallinarum* and their resistance to heat and gentamicin 267
D B Shivaraj and *G Krishnappa*
Infection of *Brucella melitensis* in guinea pig (*Cavia porcellus*) 269
Subhash Verma, R C Katoch and *V K Gupta*

Effect of *Fasciola gigantica* infection on the quality and quantity of wool production of *Baluchi* sheep 271
J Hagh-Nazari and *A Dalimi*
Anatomy of the accessory genital glands of a male yak 274
L S Sudhakar, D N Sharma and *R L Bhardwaj*
Reconstruction of ulnar segmental defects with autograft and ceramic biomaterials - A scanning electron microscopic (SEM) study 276
Surjeet Singh, Gaj Raj Singh, Satish Kumar and *S K Maiti*
Sexual behaviour and seminal characteristics in Jersey, Sahiwal and halfbred bulls 279
S P Singh, R K Pandit and *H B S Bhadoria*
Synchronization of oestrus using progesterone and PMSG inOsmanabadi goats 281
A D Patil, B P Kurhe, K R Phalak and *R L Dhoble*
Pathology of nervous systems in furazolidone-dinitro-ortho-toluamide (FZ-DOT) toxicity in laying hens 283
H D Mallikarjunaiah, S K Vijayasarathi, R N Sreenivas Gowda and *M L Satyanarayana*
Estimation of genetic gain in milk yield by selection in a Sahiwal herds of India 286
S K Singh and *R Nagarcenkar*
Effect of yeast culture (YEA-SACC1026) supplement on fermentation and *in sacco* digestibility of some roughages in buffalo calves 289
??
Feedlot and carcass studies on Sirohi, Marwari and Kutchi kids with economics of production under intensive system of management 294
B S Mehta, B U Khan and *A K S Tomar*
Nutrient requirement of growing angora rabbits 298
Geetanjali Singh, K S Sharma, Meena Kumari and *B S Katoch*
Direct and correlated response to selection for productive and reproductive traits in Sahiwal cows 302
Mohan Singh, N S Sidhu and *G S Bisht*
Prediction of life time production in Murrah buffaloes 304
R S Gandhi and *Avtar Singh*
Carcass traits of Large White Yorkshire, Hampshire and Naga local pigs 307
P P Rohilla, K M Bujarbaruah, M Kumar and *G Singh*
Effect of feeding legume forage hay on milk yield of halfbred dairy cows at Chitedze Research Station during the dry season 309
F C Chigwa, J P Mtimuni and *J W Banda*
Response of White Leghorn Layers to diet fed with various levels of probiotic 311
A K Panda, S V Rama Rao, M R Reddy and *N K Praharaj*
Effect of mixed coccidiosis and dietary supplementation of calcium and zinc on some mineral retention in broilers 313
Poonam Khanagwal, A B Mandal and *J D Ghosh*
Factors influencing pre-and post-weaning survivability of exotic sheep 316
T A S Ganai and *R S Pandey*
Yield and composition of milk in Assam local and Beetal × Assam local crossbred goats 319
B N Saikia, K K Baruah, P Chakravorty and *A Choudhury*
The effect of individual and group housing systems on the growth rate and feed efficiency of brown Swiss calves 322
Mete Yanar, Naci Tuzemen, Sadrettin Yuksel and *Leyla Turgut*
Influence of socio-economic variables on adoption of buffalo-calf rearing management practices in rural Haryana 325
Rajender Singh and *Narinder Singh*
An appraisal of buffalo husbandry in central Himalayan region 327
Mahesh Chander, A Dey, Sanjay Kumar and *P C Harbola*
Communication linkages used by researchers for generation of poultry production technology 329
A S Shaikh, H P S Arya and *T R Nikam*
Humoral and cell-mediated immune responses of lambs against bluetongue virus 337
V V Deshmukh and *M B Gujar*
Humoral immune response in broilers against inclusion body hepatitis virus 340
V V Deshmukh, Abdul Aziz and *M B Gujar*

Pathogenicity of chicken and pigeon isolates of Newcastle disease virus 343
S Mishra, J M Kataria, K C Verma and *J P Mishra*
Strain differentiation of Newcastle disease viruses by laboratory testes 346
S Mishra, J M Kataria, K C Verma and *J P Mishra*
Role of *Lymnaea luteola* in spreading *Schistosoma incognitum* in an endemic area 349
M C Agrawal, Jomini George and *Samidha Gupta*
Haematological changes in experimental haemonchosis in Barbari goats 353
D K Sharma, P P S Chauhan and *R D Agrawal*
Clinical, hematological and biochemical observations following plasma and glycerin stored tendon allografting in equids 356
N S Saini and *K K Mirakhur*
Post-operative pain management in dogs : Efficacy of preemptive analgesia with lignocaine and ketamine 362
Hans Raj, Amarpal, G R Singh and *H P Aithal*
Status of reproductive performance in rural buffaloes artificially inseminated using deep frozen semen 366
S B Gokhale and *R L Bhagat*
Biology of ovarian follicles in goat 369
R K Sharma, S S Guraya and *M B Sharma*
Efficacy of dietary protein against monocrotophos toxicity on some carbohydrate metabolic enzymes in rats 386
Neeta Raj Sharma, Ameeta Kushwah and *H S Kushwah*
Pathogenicity of Newcastle disease virus in guinea fowl 390
S Mishra, J M Kataria, K C Verma and *J P Mishra*
Incidence of spastic paresis in bullocks in Gujarat 392
D R Barvalia, D B Patil and *R R Parsania*
Sedative analgesic and some cardiopulmonary effects of romifidine in dogs 394
Amarpal, H P Aithal, P Kinjavdekar, A M Pawde and *A K Sharma*
Reduced responsiveness of oxyclozanide and tetramisole hydrochloride combinations to gastrointestinal parasites of sheep 396
S S Chaudhri
Disposition kinetics of sulfadoxine following oral administration in poultry 399
S K Jain and *J S Punia*
Serum proteins in crossbred (Friesian × Hariana) pregnant cows and its calves 401
B Prabha, C Singh, M Murtuza and *R P Pandey*
Circulatory level of follicle stimulating hormoe (FSH) in Murrah buffalo heifers (*Bubalus bubalis*) 403
C Singh and *M L Madan*
Clinicopathological changes in pigs experimentally infected with *Sarcoptes scabiei* 405
B Oroon, D K Thakur, S K Singh and *M K Gupta*
Observations during parturition in Black Bengal goats 407
S K Ghosh and *Asit Das*
Performance of crossbred cattle and comparison of sires evaluation methods under organised farm condition 409
G Sahana and *M Gurnani*
Effect of urea supplementation of urea molasses mineral block (UMMB) lick on nutrient utilization and rumen fermentation pattern in crossbred cattle 415
Saroj Toppo, U R Mehra and *R S Dass*
Intake, digestibility and growth of roaster rabbits fed graded dietary levels of neem (*Azadirachta indica*) seed kernel-cake 419
P Vasanthakumar, K Sharma and *V R B Sastry*
Evaluation of lustre and physical attributes of wool in Marwari and Nali sheep breeds 423
M K Sharma, V K Singh, B K Beniwal, S C Mehta and *R S Gahlot*
Reproductive performance of Muzaffarnagari sheep and its crossbred progeny 426
N Das
Effect of feeding rumen protected and unprotected protein on nutrients intake and reproductive performance of lactating buffaloes 428
A Bharadwaj, B P Sengupta and *R K Sethi*

Utilization of tumba (*Citrullus colocynthis*) seed-cake of desert for goat production 431
B K Mathur, A K Patel and *S K Kaushish*
Body composition and mineral status of some common fish varieties from village ponds 434
M S Chari, R K Jain, S P Tiwari and *S Rajagopal*
Isolation and characterisation of *Pasteurella haemolytica* from a field outbreak in sheep of Rajasthan 443
N Mishra, S Mishra, R V S Pawaiya and *P S K Bhagwan*
Extraction, purification and preparation of species-specific phenolic glycolipid (PGL) from *Mycobacterium bovis* (AN5) 446
Sujit Naayak, Rishendra Verma, Nirmala Kumari and *K Venkatesan*
Comparative seroreactivity of piroplasm antigens of *Theileria annulata* 449
B Dutta, G C Bansal, D Ray and *S K Ghorui*
Acid-base and blood gas parameters in relation to obstetrical assistance in dystocia affected buffaloes 452
S Prabhakar, A S Nanda, K K Mirakhur and *S P S Ghuman*
Evaluation of osmotic fragility of erythrocytes in dystocia affected buffaloes 455
S Prabhakar, A S Nanda and *S P S Ghuman*
Sonography of the canine healthy and diseased spleen - A clinical study 458
M S Bhadwal and *K K Mirakhur*
Histological changes in endometrium during follicular and luteal phases in water buffalo (*Bubalus bubalis*) 462
N Alboghobeish
Evaluation of bacterial load in fresh ejaculates of bovine and buffalo bull semen in Himachal Pradesh 465
Sandeep Jasial, R C Katoch, Deepti Chachara and *Arvind Mahajan*
Effects of BBF (Bubaline biological fluids) on post incubation motility of buffalo spermatoxzoa 468
Rajnish Agarwal and *L P Singh*
Plasma thyroid hormones concentrations in donkey stallion (*Equus cabalus*) 471
N S Bugalia, Satish Sharma, S L Garg, Virender Kumar and *Suresh Chander*
Topographical anatomy of spinal cord and epidural anaesthesia in yak (*Bos grunniens*) 473
Kulbhushan, A C Varshney, D N Sharma, S K Sharma and *Mohinder Singh*
Pharmacokinetics and dosage of ciprofloxacin in buffalo calves 475
R Raina, R P Uppal, Vinod Kumar and *B D Garg*
Haematobiochemical changes following experimental stragulation of isolated loop in buffalo calves 478
D M Makhdoomi, A P Singh, M P Singh and *D Krishnamurthy*
Romifidine-pentazocine anaesthetic combination in atropine premedicated goats 480
A Saxena, A K Sharma, H P Aithal and *B Singh*
Role of synovia in superficial flexor tendon repair using plasma preserved tendon allograft : Microscopic and scanning electron microscopic study 482
Naveen Kumar, A K Sharma, A K Sharma and *Satish Kumar*
Quanity and quality of oocytes aspirated from buffalo ovaries : effect of presence of a *Corpus leteum* 486
S Nandi, M S Chauhan and *P Palta*
The drug resistant bacteria associated with frozen semen technology of cow and buffalo bulls 488
Sandeep Jasial, R C Katoch, Deepti Narang and *Arvind Mahajan*
Effect of lambda cyhalothrin, a prethroid insecticide on haematological parameters in female rats 490
H Krishnappa, Honnegowda, T P Suresh, K Jayakumar and *K Narayana*
Effect of climatic on johne's disease incidence in goat herds 492
S V Singh and *N Singh*
Blood biochemical changes during lactation in different breeds of goat 494
S K Kaushish, S A Karim and *P S Rawat*
Genetic and phenotypic parameters estimated from single and multi-trait restricted maximum likelihood procedure 497
K L Raheja, A K Vinayak and *Sunil Kalra*
Growth and meat yield in native naked neck, exotic chicken and their crossbred: F_2 generation 501
M E Haque and *M A R Howlider*
Effect of trace mineral (mineral capsule) supplementation on nutrient utilization and rumen fermentation pattern in Sahiwal cows (*Bos indicus*) 504
S P Tiwari, R K Jain, U K Mishra, O P Mishra, J R Patel and *S Rajagopal*
Protein requirement and efficiency of utilization for maintenance and milk production 508
S Rajagopal, S P Tiwari and *U K Mishra*

Effect of ammoniation of wheat straw alone or in combination with wet corn gluten feed on fibre digestion kinetics 513
K K Singhal and *Rick Grant*
Effect of feeding *marua* (*Eleusine coracana*) as an energy source in the grower ration in large white Yorkshire piglets 518
U K Hati, A P Sinha, S K Singh and *J P Srivastava*
Mineral status of local forages and their effect on blod level of goats 521
R K Jain, S P Tiwari, M S Chari, G K Duttam, R K Nema, R C Dhir and *S Rajagopal*
Effect of soyben feeding in place of fish-meal on feed conversion efficiency and economics of pig farming 524
Ashok Kumar, S Thakur and *S K Singh*
Feed resources for rearing livestock in the Bundelkhand region of Uttar Pradesh 526
Sandeep Saran, R A Singh, Rajvir Singh, S Isabella Rani and *K K Singh*
Productive and reproductive performance of tharparkar cattle in hot arid region 530
A K Patel, B K Mathur, A C Mathur, J P Mittal and *S K Kaushish*
Colostrum yield, its relation with economic traits and prediction of part lactation yields in Murrah buffaloes 533
S K Mondal and *G S Verma*
Lifetime traits in tharparkar cattle 535
T K Bhattacharjya, Pushpendra Kumar and *J D Joshi*
Genetic studies on growth and greasy fleece yield in bharat merino sheep 537
A K S Tomar, B S Mehta, J Jaishankar and *Gurmej Singh*
Genetic and environmental factors influencing greasy fleece yield in a closed flock of corriedale sheep 540
M Y Mir, K S Risam, M A Kirmani and *T A S Ganai*
Effect of stress facators on physiological responses of goat during transportation 543
K S Das, B B Srivastava and *N Das*
Recent leptospires isolates from Tamil Nadu 551
K Natarajaseenivasan and *S Ratnam*
Serological response of chicken to various New castle disease virus isolates 556
S Misra, J M Kataria, K C Verma and *J P Misra*
Effect of different levels of nutrition on experimental bubalian trypanosomosis 559
B S Malik, S S Chaudhri and *R P Gupta*
Histomorphological and histochemical evaluation following osteoectomy and grafting in femur of dogs 563
Parminder Jit Singh, D C Dhablania and *K S Roy*
Gross and histomorphological evaluation of therapeutic ultrasound (0.5 W/cm^2) following autogenous cancellous bone grafting in dogs 567
R K Grover, V K Sobti and *K S Roy*
Dosage regimen of methylene blue and its comparative therapeutic efficacy of tolonium chloride and ascorbic acid in induced acute toxicity in goats 572
D B Mondal and *N M Pandey*
Luteinizing hormone profile and its correlation with ovarian response, embryo recovery and quality of embryos in prostaglandin F_2 alpha and syncro-mate -B induced superovulated crossbred cows 576
A Joe Arosh, K Sakhila, T G Devananthan and *D Kathiresan*
One-step reverse transcription-polymerase chain reaction for detection of bluetongue virus RNA 582
A K Tiwari, R S Kataria, G Butchaiah and *S K Das*
Effect of *Salmonella* toxins on humoral and cell mediated immunity of chickens 584
S K Singh, R S Gupta, V D Sharma and *R S Chauhan*
Comparative evaluation of efficacy of intra-articular administration of dimethylsulfoxide with and without synovial fluid transplant in treatment of aseptic arthritis in calves 586
Rishi Tayal, I S Chandana, B A Moulvi and *Jit Singh*
Distribution pattern of oestrus in Jakhrana goats 589
A K Goel and *K P Agrawal*
Ovarian cholinergic inervation during different reproductive phases in house rat (*Rattus rattus*) 591
B K Batth and *R K Prashad*
Erythrocyte sedimentation rate (ESR) and blod clotting time (BCT) in crossbred (Hariana x Friesian) preparturient cows and its calves 594
B Prabha and *C Singh*

Effect of endosulfan on lipid pattern of brain tissue in developing chick embryo 596
Pushpanjali, A K Pal and *R L Prasad*
Renal lesions of suspected case of oak poisoning in a crossbred heifer 598
S P Singh, R K Asrani, V K Gupta, K K Dogra, Mandeep Sharma and *R C Katoch*
Induced hypothyroidism in goats 600
N B Vadnere, B T Deshmukh, B A Talvelkar, A S Nagvekar and *S R Chinchkar*
Casein polymorphism in the milk of mithun 603
N C Nath
Randomly amplified polymorphic DNA markers in genetic analysis of relatedness in Japanese quail lines 604
K Ganesh Kumar, Sanjeev Kuamr, S P S Ahlawat, P Kuamr, R K Singh and *G S Bisht*
Performance of crossbred dairy cattle in farmers herds 608
M K Rao, A Obi Reddy and *B V Bhaskar*
Genetic improvement thrrough complete restricted selection indices in Surti buffalo 613
S P Tailor, O P Pathodiya and *Bachchu Singh*
Physiological responses and metabolic profile of lambs in growth phase 616
S K Kaushish, S A Karim and *P S Rawat*
Interaction of dietary calcium and zinc with coccidiosis in relation to broiler performance 619
Poonam Khanagwa, J D Ghosh and *A B Mandal*
Effect of dietary palm kernel-oil supplementation on biotin requirement of broilers 623
R A Oloyo and *B K Ogunmodede*
Effect of fermented skimmed milk incorporation into buffalo milk on quality of reduced-fat paneer 628
M K Sanyal and *P L Yadav*
Tractive performance of draught animals in mountain farming systems: A sutdy of central Himalaya, India 632
Vir Singh and *Tej Pratap*
A comparison of sire evaluation methods 643
S S Dhaka and *K L Raheja*
Maximum likelihood estimates of heritability of different economic traits in Sahiwal 645
A D Thore and *M D Kothekar*
Genetic and non-genetic factors affecting growth in Bharat Merino sheep 647
A K S Tomar, B S Mehta and *Gurmej Singh*
Kodi Adu - A new goat breed of Tamil Nadu 649
A Jain, G Sahana, N Kandasamy and *A E Nivsarkar*
Non-genetic sources of variation influencing semen production in Jersey bulls 652
M N Sundararaman, P Thangaraju and *M John Edwin*
Direct and correlated response to selection in Landrace pigs 654
K P Singh, S P S Ahlawat and *S Malik*
Genetic evaluation on White Leghorn strains for egg weight 656
K B Prabhakaran, A Jalaludeen, A K K Unni and *Leo Joseph*
Effect of defaunation on carcass and meat characteristic of finisher lambs 659
A R Sen, S A Karim and *A Santra*
On farm trial on silage : Effect of urea and molasses addition on the quality of garu (*Goix lacryma jobi*) grass silage ensiled in plastic bags 662
A K Misra, A K Samanta, N C Verma and *A P Singh*
Impact of level of sodium chloride, calcium and phosphorus content with feed on the production performance of layers 664
M Murugan, V Ramesh Saravana Kumar, K R Krishnan and *R Thangamani*
Age and growth of the mullets, *Liza subviridis*, *L. carinata*, and *Valamugil cunnesius* (Family : Mugilidae) from Sandspit backwaters along Karachi coast (northern Arabian Sea) 667
Mateen Samad and *Ghulam Abbas*
Follicle stimulating hormone profile and its correlation with ovarian response, embryo recovery and quality of embryos in prostaglandin F_2 alpha and syncromate -B with folltropin induced superovulated crossbred cows 679
A Joe Arosh, K Sakhila, T G Devanathan and *D Kathiresan*

Number and quality of buffalo oocytes recovered relative to method of harvest, stage of estrous cycle and corpus luteum 684
Deepak Sharma and *V K Taneja*
Enrichment of Y-bearing buck spermatozoa using bovine serum albumin column 688
R N Chatterjee and *A C Majumdar*
Reproductive performance of Kanni Adu goats under field conditions 691
A K Thiruvenkadan, S Panneerselvam and *N Kandasamy*
Effect of force-feeding on thyroxine, testosterone, total body water, and biological half-life (t1/2) of ^{3}MOH in duck and geese under Egyptian conditions 694
I F M Marai, K A O Yamani, M S Nowar and *Z A Ibrahim*
Non-radioactive detection of telomerase activity in cell lines by silver nitrate staining 698
R K Singh, S N Mishra and *G Butchaiah*
rDNA fingerprinting for *Mycobacterium bovis* 701
P Dandapat, Rishendra Verma, H B Singh, V D Sharma, D Singh and *V M Katoch*
Pharmacokinetics of Diminazene in crossbred calves following single intramuscular administration 703
S Rampal and *R K Chaudhary*
Impact of industrial fluorosis on composition of blood and urine in cattle and buffalo 705
S K Dwivedi, R C Patra and *B Bhardwaj*
Biochemical alterations induced by repeated dermal toxicity of cypermethrin and deltamethrin in buffalo calves 708
Jagvinder Kaur and *H S Sandhu*
Oocyte recovery from buffalo slaughterhouse ovaries 710
P S Yadav, O K Hooda and *R K Sethi*
Micro mineral profiles during cyclic, postpartum anoestrus and repeat breeding cows in Lower Brahmaputra Valley of Assam 712
A Dutta, B Baruah, B C Sarmah, K K Baruah, D N Sarma and *J C Dutta*
Oestrus synchronization in Jakhrana goats following administrations of prostaglandin and intravaginal sponges 714
A K Goel and *K P Agrawal*
A common method for MHC typing of farm animals using PCR-RFLP 716
T J Rasool, H J Dechamma and *E Sreekumar*
Variation in production performance of Tharparkar cows in north-western Rajasthan 718
G C Gahlot, K P Pant and *R N Kachawaha*
Distribution, characteristics and production performance of Kanni Adu goats of Tamil Nadu 723
A K Thiruvenkadan, S Panneerselvam and *N Kandasamy*
Genetic and phenotype trends for economic traits in large in White Yorkshire Pigs 728
Gajender Singh and *A S Khanna*
Genetic analysis of egg-shell abnormalities in layer chickens 732
M S Khatkar, J S Sandhu, G S Brah and *M L Chaudhary*
Effect of graded levels of iodine supplementation on the performance of Barbari goats 736
S P S Bedi, A K Pattanaik, S A Khan and *A Kumar*
Effect of cooking soybean on DM digestibility and energy in pigs 740
F G Kaankuka, T F Balogun, G S Bawa and *S Duru*
Estimates of heritability and repeatability for important productive and reproductive traints in Sahiwal cattle 744
Mohan Singh, N S Sidhu and *G S Bisht*
Selection index for genetic improvement of broiler traits 747
A Singh, C V Singh, R V Singh and *D Kumar*
Meat characters of crossbred broiler rabbits 751
B Ramesh Gupta, V Prabhakar Rao, C Eswara Reddy, A Satyanarayana and *P P Reddy*
Rumen content as a potential feed for livestock - beef cattle fattening 754
N M Anigbogu
Nutrient utilization, energy balance and rumen fermentation pattern of local goats fed dry mixed grass and different sources of protein 756
U P Singh, G N Lodhi, V C Pachauri and *S K Mahanta*
Production of sterigmatocystin on rice grains by *Aspergillus versicolor* 759
G V Sudhakar Rao and *V Titus George*

Chemical composition, *in sacco* nutrients digestibilty and availability index of *Chionachne koeniggi* germplasm 761
Sultan Singh, R N Choubey, P K Katiyar and *J K S Sachan*
Influence of Niacin supplementation on rumen fermentation and microbial protein synthesis in buffaloes 764
O P Nangia, Meenakshi Gupta, Sonia Sindhu and *S K Garg*
Incidence of toxigenic molds in dairy foods and animal feeds 766
Suman Mor and *Kishan Singh*
Meat production potential in Murrah buffalo male calves under different systems of feeding management 769
A Bharadwaj and *R K Sethi*
Influence of NPK fertilization of carp ponds in polyculture rearing : A preliminary investigation 771
Ghulam Abbas
Effect of captive rearing on sperm quality in *Penaeus monodon* 777
P S P Gupta and *L H Rao*
Spermatophore regeneration time in *Penaeus monodon* 780
P S P Gupta and *L H Rao*
Antigenic analysis of *M. paratuberculosis* strain TEPS by SDS-PAGE and two dimensional immunoelectrophoresis 789
T K Goswami, S N Joardar and *G C Ram*
Repeatability of faecal egg-count and haematological values in sheep experimentally infected with *Haemonchus contortus* 792
C P Swarnkar, F A Khan, J Jayasankar, D Singh and *P S K Bhagwan*
Chemotherapeutic efficacy of praziquantel and closantel in experimental porcine schistosomiasis 797
N Shames, M C Agrawal and *K N P Rao*
Age correlated histomorphological changes in the cervix of buffalo (*Bubalus Bubalis*) 801
Varinder Uppal and *K S Roy*
Relationship of age and scrotal circumstance with the seminal characteristics of Crossbred bulls 804
S Sudheer
Effect of oestrus cervical mucus peroxidase and fern pattern on fertility in crossbred cows 807
S K Srivastava, Uma Shanker and *S K Agrawal*
Ovulation induction with human chorionic gonadotropin (hCG) an gonadotropin releasing hormone (GnRH) in mares 810
M Bozkurt Ataman, Aytekin Gunay, Mehmet Uzman and *Ulgen Gunay*
Comparison of RNA-polyacrylamide gel electrophoresis, ELISA and discontinuous counterimmuno-electrophoresis to detect rotavirus from diarrhoeic cow and buffalo calves 813
S R Jindal, M S Oberoi and *N K Maiti*
Dot-enxyme immuno assay for the diagnosis of *Theileria annulata* infection in cattle and buffaloes 815
C Soundarajan, G Rajavelu, R Anandan and *P Ramadass*
Prevalence and epidemoilogy of *Toxocara vitulorum* in cow and buffaloe calves in and around Ranchi, Bihar 817
H Usharani Devi, M Z Ansari, S K Singh and *K H Bijubala Devi*
Mycoflora of the natural orifices of healthy yaks 820
Anirban Pal and B C Kar
Effect of praziquantel and closantel treatment on haematology and faecal egg count in experimental porcine schistosomiasis 823
J Jain, N Shames, M C Agrawal and *K N P Rao*
Applied anatomy of the sacrum of Yak (*Bos grunniens*) 826
Archana and *D N Sharma*
Lumbar epidural analgesia with ketamine and xylazine in goats 828
P Kinjavdekar, H P Aithal, Amarpal, M Hoque and *K Pratap*
Homologous circumferential tracheal grafting in goats 830
M Hoque,I V Mogha, N Kumar, G R Singh and *K Charan*
Multiple ovulation embryo transfer for conserving vechur cattle of Kerala 833
R Thirupathy Venkatachalapathy, D Jayachandran, V S Venugopal and *Sosamma Iype*
In vitro maturation of ovine oocytes using three different media 835
N A Wani and *G M Wani*
Post lambing biochemical profiles in Marwari and Patanwadi sheep 837
S P Madhira, L V Deshpande, V P Vadodaria, K N Wadhwani and *A M Patel*

Pellet freezing of ram semen and associated alterations in enzyme activity 839
N D Ingale, B N Suthar and *V K Sharma*
Ovarian steroid activity and embryo recovery after superovulatory treatment in cyclic Assam Local x Beetal crossbred goat 841
D J Dutta, A Dutta, J Goswami and *R K Biswas*
Comparative serum protein of mithun (*Bos frontalis*), yak (*Bos grunniens*) and zebu (*Bos indicus*) 843
N C Nath, A Aziz and *M Bhattacharya*
Efficacy of various lactobacills strains on broiler production 845
S Senani, S K Saha, M K Padhi and *R B Rai*
Histochemical alterations in lantana toxicity 847
R K Mandial, S N S Randhawa and *K S Roy*
Rumen fermentation characteristics, ciliate protozoa and utilization of nutrients in sheep fed sodium hydroxide treated mustard straw 850
A S Mishra, A Santra, O H Chaturvedi, A K Misra, R Prasad and *R C Jakhmola*
Comparative fermentation charcteristics, ciliate protozoa and utilization of nutrients in sheep fed sodium hydroxide treated mustard straw 854
A Mishra, O H Chaturvedi, A K Misra and *S A Karim*
Physiological responses of native and crossbred sheep to climatic stress under semi-arid conditions 857
Ashutosh, O P Dhanda and *R L Kundu*
Cross-over designs for comparison of two treatments in presence of residual effects 862
Cini Varghese, B Vijaya and *V K Sharma*
Biomolecular recognition studies of buffalo plasma fibronectin with DNA and heparin 866
Reena Arora and *Satish Kumar*
On-farm trial on ammoniated wheat-straw: Effect on intake and milk yield in Murrah Buffalo 868
AK Misra, A K Samanta, A P Singh and *N C Verma*
Effect of supplementing sulphur on the natural fermentation of wheat straw with urea 871
M Gangwar and *M P S Bakshi*
Effect of *Coprinus fimetarius* on the natural fermentation of wheat straw with urea 874
O H Chaturvedi, A Santra, A S Mishra, A K Misra, R Prasad and *S A Karim*
Observation on aspects of work efficiency, feeding management income generation by donkeys (*Equus asinus*) in Urban Gujarat 877
A M Patel, K N Wadhwani, S Parnerkar, P R Pandya, L H Saiyed and *R S Gupta*
Synecology of rotifers in a tropical floodplain lake of Upper Assam (N.E. India) 880
B K Sharma
Evaluation of sperm quality and quantity in *Penaeus Monodon* Fabricius 886
P S P Gupta and *L H Rao*
Antibiotic resistance - A comparison between biofilm and free cells of *Escherichia coli* and *Staphylococcus aureus* from anine pyometra 895
B S Rekha and *G Krishnappa*
Micro-organisms associated with non-functional mammary gland quarters in dairy cows in small-scale farms in Kenya 897
C M Mulei
Characterization of lipid pattern of *Mycobacterium paratuberculosis* isolates from goats and sheep 899
S V Singh, P P Singh, N Singh and *V K Gupta*
Amoebiasis in wild monkey (*Macaca mulatta*) in India and its public health significance 904
S Samanta and *S Dey*
Histology and hitochemistry of von Ebner's and lingual glands in sheep and goats 906
R B Biradar and *V Ramkrishna*
Achilles tendon allografting in dogs - Clinical and haematological observations 909
G S Gill, K K Mirakhur and *N S Saini*
Vinblastin-podophylotoxin a good mitotic agent for preparing embryonic chromosomes 912
Mahesh Datt and *Arjava Sharma*
Effect of multiple showering and artificial aeration on sexual behaviour, quality and freezability of buffalo bull semen during hot-humid season 914
Pawan Singh and *N Singh*

Hydropericardium syndrome of broiler chicks in West Bengal 917
Dhurba Chakraborty, Tapan Kumar Sadhukhan, Gopal Chadra Chakraborty, Dipali Banerjee and *Amiya Kumar Ghosh*
Application of non-radioactive hybridization assay in detection of infectious bursal disease (IBD) 919
M Parthiban, V Thiagarajan and *P Ramadass*
Hyalomma marginatum isaaci - Pathological changes in tick bite naive and repeatedly infested New Zealand White Rabbits - A comparison 921
Bhaskaran Ravi Latha, B Murali Manohar and *G Rajavelu*
Anatomy of the occipital bone of yak 923
Archana, L S Sudhakar and *D N Sharma*
Clinico-pathomorphological studies on induced cypermethrin toxicity in crossbred cow calves 925
B J Patel, S P Singh, S N Sharma and *D V Joshi*
Clinico-physiological studies on xylazine and medetomidine for lumbosacral epidural anaesthesia in buffalo calves 929
K Pratap, Amarpal and *P Kinjavdekar*
Efficacy of GnRH analogue (buserelin) for treatment of anestrus in crossbred cows under temperate farm conditions 931
Harendra Kumar, T S Nair and *V B Chaturvedi*
Plasma prolactin (PRL) concentration in Murrah buffalo heifers (*Bubalus bubalis*) with and without GnRH administration 933
C Singh and *M L Madan*
Computer assisted semen analysis of crossbred buck semen 936
A T Chavan and *M M Kale*
Blood metabolites and mineral status of sheep maintained under two rearing practices 938
A K Misra, S K Sankhyan, A K Shinde, R Bhatta, S A Karim and *A K Tyagi*
Aeromonads in food of animal origin 942
R K Agarwal, K N Kapoor, A Kumar and *K N Bhilegaonkar*
Genotyping of dairy animals using DNA from milk somatic cells 944
S De, R K Singh, P K Gupta, S Palia and *G Butchaiah*
Genetic cost of restriction and restricted selection indices for genetic improvement in Marwari sheep 947
N A Ganai, S B S Yadav, R N Kachwaha and *V K Singh*
Banding pattern induced by isochizomeric restriction endonucleases Mspi and Hpa II on chromosomes of cattle 953
S S Tomar and *S L Goswami*
Multi-stage selection strategy for genetic improvement of Marwari sheep 957
N A Ganai, S B S Yadav, R N Kachwaha, K P Pant and *V K Singh*
Substituting dehulled full-fat sunflower seed-meal for soybean-meal in Japanese quail diets 961
S K Fouzder, N R M Z Khan, M A R Howlider and *M L Ali*
Soil-plant animal relationship of zinc in milch buffaloes of Jind district in Haryana 965
Sunil Yadav and *S S Khirwar*
Effect of grazing sewan (*Lasiurus sindicus*) pasture on female camels in arid ecosystem 968
A K Nagpal, M S Sahani and *A K Roy*
Effect of two different environmental conditions on the fattening performance of Brown Swiss Bulls 972
Mete Yanar, Naci Tuzemen and *Leyla Turgut*
Distribution of haemoglobin genes at different levels of exotic inheritance in crossbred cattle (*Bos taurus* x *Bos indicus*) 974
N K Mazumder, Asha Mazumdar, Parminder Singh and *S K Mahapatra*
Replacement of whole milk by milk replacer in the ration of Holstein-Friesian calves raised in eastern Turkey 977
Mete Yanar, Sadrettin Yuksel and *Ugur Zulkadir*
Effect of marua (*Eleusine coracana*) feeding on growth rate and carcass traits of Large White Yorkshire pigs 980
U K Hati, A P Sinha, S K Singh and *J P Srivastava*
Effect of supplementation of a yeast preparation on milk production and its composition in Murrah buffaloes 983
Umesh Kumar, Vijay Kumar Sareen and *Sudarshan Singh*
Improved pig rearing practices and its constraints in plateau region of Bihar 985
A K Pandey and *Ram Kumar*
Carcass characteristics of finisher lambs maintained on grazing with concentrate supplementation 988
A R Sen, S A Karim and *A Santra*

Assessment of carcass characteristics of roaster rabbits fed graded levels of neem (*Azadirachta indica*) seed kernel-cake 991
P Vasanthakumar, K Sharma and *V R B Sastry*
Fractionation and immunoreactivity of *Mycobacterium bovis* AN5 sonicated antigens 1001
V K Gupta and *G C Ram*
Fractionation and immunoreactivity of *Mycobacterium bovis* AN5 culture filtrate antigens 1008
V K Gupta and *G C Ram*
Fractionation and immunoreactivity of membrane associated proteins of *Mycobacterium bovis* AN5 1015
V K Gupta and *G C Ram*
Angiography of renal artery with special reference to the blood supply of the kidney in camel 1021
Anuradha, R K Jain and *A N Gupta*
Angiography of testicular artery with special reference to the blood supply of the testis in camel 1025
Anuradha, R K Jain and *A N Gupta*
Semen production performance of frieswal bulls 1032
S Tyagi, A K Mathur and *S C Agarwal*
Follicular atresia in goat: A review 1035
R K Sharma
Comparison of different serological tests for detection of bovine herpes virus 1 antibodies in sheep 1047
Rakesh Pratap Singh, M Narayana Bhat and *K K V Sastry*
Morphogenesis of aorta and pulmonary trunk in pre and post natal goats 1049
Rakhi Vaish, M L Parmar and *M R Malik*
Induction of acute renal failure by uninephrectomy along with subtotal nephrectomy in goats 1052
M A K Shama, N N Pandey and *G R Singh*
Histological changes during various augmentation cystoplasty procedures in canines 1054
V Haragopal, R V Suresh Kumar and *Ramakrishna O*
Effect of methanol extract of *Stylosanthes scabra* on Ixodid ticks of animals 1057
Mohamed Khudrathulla and *M S Jagannath*
Pharmacokinetics and dosage regimen of sodium salicylate in cross-bred calves following a single intravenous injection 1059
V K Dumka, S K Sharma and *A K Srivastava*
Comparative efficacy of a herbal anthelmintic and piperazine citrate against natural infection of *Toxocara vitulorum* (Goeze 1982) in cow and buffalo calves 1062
H Usharani Devi, M Z Ansari, S K Singh, D K Thakur and *K H Bijubala Devi*
Embryo recoveries to different superovulatory regimes and live births subsequent to non-surgical embryo transfer in Rathi and its crossbred cows 1064
G N Purohit, Mahesh Datt and *S S Sharma*
Effect of protein concentration and ferning pattern of bovine cervical mucus on sperm penetration 1067
L P Singh and *Rajnish Agrawal*
Comparative oestrus behaviour of Muzaffarnagri sheep and its crosses with dorset 1069
N K Sinha and *B U Khan*
Studies on rumen functionin uterine torsion in buffaloes 1071
N K Dahiya, Suresh Chander, R K Chandodlia and *S L Garg*
The effect of chemical defaunation on rumen bacterial, protozoal population and enzyme activities in the cattle and buffalo rumen 1074
D S Sahu, Krishna Prasad, I S Agrawal and *M L Verma*
Influence of inbreeding level on economic traits of imported rabbit populations in Egypt 1077
H M Farghaly
Inheritance in nutritive value of rice straw quality 1081
R K Sohane and *M Singh*
Effect off feeding various combinations of soybean and jowar straw on the growth performance of Murrah heifers 1085
A G Mahakhode and *L M Karanjkar*
Effect of different flooring materials on body weight and measurement of crossbred (LWY x DESHI) piglets 1087
P K Jain and *V K Bajpai*

Influence of diet composition, starvation and feeding frequency on gastric evacuation rates in Catla, *Catla catla* (Hamilton) fingerlings 1091
Mansing K Naik, H R V Reddy and *T S Annappaswamy*
Limno-chemical parameters vis-a-vis productivity in pong reservoir, Himachal Pradesh 1094
D K Kaushal, S Kumar and *Ch. Gopalkrishnayya*
Restriction profile studies on local isolates of IBD virus 1105
M Parthiban, V Thiagarajan and *P Ramadass*
Pathogenic attributes of *Escherichia coli* isolates from free-ranging sambars (*Cervus unicolor*) 1108
Praaveen Malik, B R Singh, P M Malik and *V D Sharma*
Biological behaviour of anthelmintic resistant and susceptible strains of *Haemonchus contortus* in sheep 1112
C L Yadav, B Kumar and *S K Mishra*
Dental anatomy of yak (*Bos grunniens*) 1117
Archana, D N Sharma and *R L Bhardwaj*
Pathology of ochratoxicosis in quails 1120
G Sujani and *P K Sriraman*
Characterization of *Escherichia coli* derived from cattle milk samples using random amplification of polymorphic DNA analysis 1123
P Ramadass, M Parthiban, W Manohar Paul and *Andrew Chandra Mohan*
Pathogenesis of Newcastle disease virus isolates in pigeon 1125
S Mishra, J M Kataria, R L Sah, K C Verma and *J P Mishra*
Isolation and growth of chlamydiae in cell culture 1127
Mandeep Sharma and *A A Andersen*
Fowlpox in the trachea of laying hens 1129
S K Shukla, Rajesh Chandra and *D K Agrawal*
Chlamydial pneumonia amongst Gaddi sheep and goats in Himachal Pradesh 1131
Rajiv Kumar, R C Katoch, V K Gupta, M K Batta, Arvind Mahajan and *Prasenjit Dhar*
The bacterial pneumonia in Gaddi goats of Himachal Pradesh 1134
Rajiv Kumar, R C Katoch, Arvind Mahajan and *Prasenjit Dhar*
Efficacy evaluation of salinomycin against *Eimeria necatrix* infection in chicken by histopathological studies 1136
S Abdul Basith, G Rajavelu and *B Murali Manohar*
Haematological and biochemical alterations in experimental toxoplasmosis of poultry 1138
A V Gaikwad and *Y V Raote*
Production of aflatoxins by toxigenic isolates of *Aspergillus* species in broth 1141
Suman Mor and *Kishan Singh*
Use of grey-scale ultrasonography for evaluating canine uterus 1143
M S Bhadwal and *K K Mirakhur*
Incidence of retention of placenta with special reference to subsequent reproductive performance in Frieswal cows 1145
Savita Pandey and *R K Pandit*
Trace elements profile during growth in crossbred calves and heifers 1147
M N Harlikar, B A Talvelkar, B T Deshmukh, A S Nagvekar and *S D Ingole*
Evaluation of direct and correlated responses to family index selection for part period egg production in egg type chicken 1150
R K S Bais, D C Johari, R C Hazary and *S C Mohapatra*
Some unusual findings in goats fed *Coprinus fimetarius* treated paddy straw 1157
N S Maan, K K Jakhar, V K Khatta and *N Kumar*
Technique for determination of intake by bovines through grazing 1160
B C Saxena, K K Tyagi and *Vijay Bindal*
Direct and correlated responses to selection in first lactation and lifetime traits in Murrah buffaloes 1163
S V Kuralkar and *K L Raheja*
Non-genetic factors affecting growth of Beetal halfbred kids 1165
D K Singh, N S Singh and *L B Singh*

Genetic analysis of milk production characteristics of Black Bengal and its halfbreds 1167
D K Singh, C S P Singh, N S Singh and *L B Singh*
Feed efficiency and carcass characteristics of Aseel chicken 1170
R K Gupta, Mohan Singh, Umesh Singh and *B S Gurung*
Nutritive value of *Cenchrus* and *Stylo* as hay and fresh grass for goat 1172
R Ravi, M R Purushothaman, P Vasan and *M Murugan*
Heterosis and heritability in nutritive value in rice straw quality 1174
R K Sohane and *M Singh*
Nutritional quality of straw of different rice cultivars as assessed by *in sacco* and *in vitro* methods 1177
R K Sohane and *M Singh*
Effect of urea treatment on the cell wall constituents and *in vitro* dry matter digestibility of mustard (*Brassica campestris*) straw 1180
A K Misra, O H Chaturvedi, A S Mishra and *S A Karim*
Poultry farmers and rearing systems in the breeding tract of Aseel fowl 1183
Mohan Singh, Umesh Singh, R K Gupta and *B S Gurung*
Effect of socio-economic variables on housing management practices in rural Haryana 1185
Rajender Singh and *Nariender Singh*
Thyroid hormone levels during reproduction, development of embryo and juvenile in Indian major carps, *Catla catla* (Ham.) 1187
P K Nayak, C T Mahapatra, T K Mishra, J Mishra, B N Singh and *S Ayyappan*
Changes in thyroid hormones and 5 monodeiodinase activity during embryonic and larval developments in freshwater catfish *Heteropneustes fossilis* 1191
P K Nayak, T K Mishra, J Mishra, S Ayyappan and *B N Singh*
Application of polymerase chain reaction for early detection of infectious bursal disease virus infection 1201
M Parthiban and *V Thiagarajan*
Activation of chicken intestinal intraepithelial lymphocytes by oral administration of *Mycobacterium phlei* 1204
E Sreekumar and *Subrata K Das*
Growth dynamics of orbit and lens in prenatal goat 1208
M L Parmar, M R Malik and *J S Taluja*
Pre- and post-natal development of skin characteristics in the one humped camel (*Camelus dromedarius)* 1210
I F M Marai and *A B A Khalil*
Anaesthetic evaluation of detomidine and diazepam in buffalo calves 1218
Amarpal, A M Pawde, P Kinjavdekar, H P Aithal and *G R Singh*
Pathological changes due to the feeding of larval *Hyalomma marginatum isaaci* in crossbred calves 1221
Bhaskaran Ravi Latha, B Murali Manohar and *G Rajavelu*
Plasma levels, pharmacokinetics and dosage regimen of pefloxacin in *E. coli* endotoxin induced febrile crossbred calves 1223
V K Dumka, S P S Saini and *A K Srivastava*
Geometric anatomy of aortic quadrification and common carotid trifurcation in prenatal and postnatal goat (*Capra hircus*) 1226
Rakhi Vaish, M L Parmar, M R Malik and *J S Taluja*
Histomorphological studies on the superficial lymphnodes of Assam local goat (*Capra hircus*) 1229
Kamal Sarma, Kabita Sarma and *A Chakraborty*
Micrometrical study on the superficial lymphnodes of Assam local goat (*Capra hircus*) 1231
Kamal Sarma, Kabita Sarma and *R N Goswami*
The role of myoepithelial cells in canine mammary tumours 1233
C S Shekar, S K Vijaya Sarathi, R N Sreenivas Gowda, M L Satyanarayana and *Suguna Rao*
Nutrient requirements of goats – A review 1236
B L Saraswati and *O P S Sengar*

Effect of replacing groundnut-cake with expeller and solvent extracted mustard-cake on growth and nutrient utilization in buffalo calves 1242
S N Vashishtha, T R Chauhan and *V Sagar*

Chemical composition, *in vitro* dry matter digestibility, total phenolics and proanthocynidins in hedge lucerne (*Desmenthus virgatus*) exotic germplasm 1246
Sultan Singh, Arvind Singh Negi, D K Agarwal, P K Katiyar and *U P Singh*

The determination of viscosity in barley and using possibilities of barleys, having different viscosity, supplemented with enzyme in layer diets 1250
F Inal, B Coskun, T Balevi, H D Umucalilar, N Gülsen and *R Özkara*

Genetic studies on reproductive traits of goats 1255
D K Singh, N S Singh and *L B Singh*

Effect of feeding wheat bran and deoiled rice bran on feed intake and nutrient utilization in crossbred cows 1258
A S Singh, V K Jain, P Singh and *N N Pathak*

Standardization of technique for determining the *in vitro* digestibility of straw by rumen fungi 1261
Sultan Singh, D C Sangwan, S Singh and *K Pradhan*

Effect of type of supplementation on nutrient utilization and serum profile of camels in rut 1263
A K Nagpal, N Saini and *M S Sahani*

Utilization of different protein supplements in the diet of broiler rabbits 1266
Rajendra Prasad, S K Sankhyan and *S A Karim*

Economics of pig rearing in Haryana 1268
Rajiv Jain and *U K Pandey*

Constraints in pig farming of Haryana 1272
Rajiv Jain and *U K Pandey*

Biochemical genetic polymorphism in Indian mackerel (*Rastrelliger kanagurta*) 1276
N K Verma, I D Gupta, P C Thomas and *M K George*

Pathological studies in trouts of Himachal Pradesh 1279
Prasenjit Dhar, R C Katoch, V K Gupta and *Rajiv Kumar*

THE INDIAN JOURNAL OF ANIMAL SCIENCES

AUTHOR INDEX

Abbas Ghulam 667, 771
Agarwal D K 1246
Agarwal G S 154
Agarwal R K 942
Agarwal Rajnish 468
Agarwal S C 1032
Aggarwal Anjuli 178
Agrawal D K 1129
Agrawal I S 1074
Agrawal K P 589, 714
Agrawal M C 349, 823, 797
Agrawal R D 353
Agrawal Rajnish 1067
Agrawal S K 807
Ahlawat S P S 60, 654
Aithal H P 362, 394, 480, 828, 1218
Al-Khozam N M 146
Al-Mutawa T A 146
Alam M 133
Alboghobeish N 462
Ali M L 961
Amarpal 362, 394, 828, 929, 1218
Anandan R 815
Andersen A A 1127
Anigbogu N M 754
Annappaswamy T S 1091
Ansari M Z 817, 1062
Anuradha 1021, 1025
Anwar M 139
Archana 826, 923, 1117
Arije A 70
Arora Reena 866
Arosh A Joe 254, 576, 679
Arosh Ajoe 43
Arslan C 194
Arya H P S 329
Ashutosh 857
Asrani R K 598
Aurdkar S K 77
Ayyappan S 1187
Ayyappan S 1191
Aziz A 843
Aziz Abdul 340
Bais R K S 1150
Baishya G 248
Baishya K 35
Bajpai V K 1087
Bakshi M P S 871
Balakrishnan M 174
Balasubramanian S 43
Balevi T 1250
Balogun T F 740
Banda J W 309
Banergee A K 73
Banerjee Dipali 917
Banerjee N C 133
Bansal G C 449
Barman N N 35
Baruah Anubha 93
Baruah B 712
Baruah K K 93, 319, 712
Barvalia D R 392
Basith S Abdul 1136
Batra H V 154
Batta M K 1131
Batth B K 591
Bawa G S 740
Bedi S P S 736
Beniwal B K 423
Bhadoria H B S 279
Bhadwal M S 243, 458, 1143
Bhagat R L 366
Bhagwan P S K 443, 792
Bhakat C 211
Bharadwaj A 428, 769
Bhardwaj B 705
Bhardwaj R L 274, 1117
Bhaskar B V 608
Bhat M Narayana 1047
Bhatta R 938
Bhattacharjya T K 535
Bhattacharya B N 93
Bhattacharya M 248, 843
Bhilegaonkar K N 942
Bindal Vijay 1160
Biradar R B 906
Bisht G S 302, 604, 744
Biswas R K 841
Bozkurt Ataman M 810
Brah G S 732
Buchoo B A 176
Bugalia N S 471
Bujarbaruah K M 60, 307
Butchaiah G 582, 698, 944
Chachara Deepti 465
Chahota Rajesh 11, 22

Chakraborty A 1229
Chakraborty Dhurba 917
Chakraborty Gopal Chandra 917
Chakravorty P 319
Chandana I S 586
Chander Mahesh 327
Chander Suresh 471, 1071
Chandodlia R K 1071
Chandra R 110
Chandra Rajesh 1129
Chandramouly K N 159, 161
Chandrasekhara Rao T S 126, 129
Charan K 830
Chari M S 434, 521
Chatterjee A 56
Chatterjee R N 184, 688
Chaturvedi O H 850, 854, 874, 1180
Chaturvedi V B 931
Chaudhary M L 732
Chaudhary R K 703
Chaudhri S S 396, 559
Chauhan M S 486
Chauhan P P S 353
Chauhan R S 584
Chauhan T R 65, 1242
Chavan A T 936
Chigwa F C 309
Chinchkar S R 600
Choubey R N 764
Choudhury A 319
Coskum B 194, 1250
Dahiya N K 1071
Dahiya S S 65
Dalimi A 271
Dandapat P 701
Dang A K 181
Das Asit 407
Das B C 56
Das D N 56
Das K S 543
Das N 426, 543
Das S K 582
Das Subrata K 1204
Das Sutopa 35
Dass R S 415
Datt Mahesh 912, 1064
De S 944
Dechamma H J 716
Deepa P M 261
Deshmukh B T 600, 1147
Deshmukh V V 337
Deshpande L V 837
Devananthan T G 43, 254, 576, 679
Devegowda G 197
Devi G N Purohit 1062
Devi H Usharani 817, 1062
Devi K H Bijubala 817
Dey A 327
Dey S 904
Dhablania D C 563
Dhaka S S 643
Dhanda O P 857
Dhar Prasenjit 1131, 1134, 1279
Dhir R C 521
Dhoble R L 281
Dhumal M V 77
Dogra K K 598
Dumka V K 1059, 1223
Duru S 740
Dutt Triveni 45, 80, 87, 89
Dutta A 712, 841
Dutta B 449
Dutta D J 841
Dutta J C 712
Duttam G K 521
Dwivedi S K 705
Edwin M John 41, 652
Elangovan A V 191
Fanimo A O 70
Fard M H B 8, 39
Farghaly H M 1077
Farhoomand P 91
Fouzder S K 961
G Prasad 3
Gahlot G C 718
Gahlot R S 423
Gaikwad A V 1138
Ganai N A 947, 957
Ganai T A S 316, 540
Gandhi R S 304
Gangwar M 871
Garg B D 475
Garg S K 764
Garg S L 471, 1071
George Jomini 349
George M K 1276
George V Titus 759
Ghorui S K 449
Ghosh Amiya Kumar 917
Ghosh J D 311, 619
Ghosh S 14, 19
Ghosh S K 407
Ghuman S P S 452, 455
Gill G S 909
Goel A K 589, 714
Gokhale S B 366
Gopalkrishnayya Ch. 1094
Goswami J 841

Goswami R N 1231
Goswami S L 953
Goswami T K 789
Govindaiah M G 174
Gowda R N Sreenivas 1233
Gowda S K 191
Gowdh C V 197
Grant Rick 513
Grover R K 567
Gujar M B 337, 340
Gulsen N 194, 1250
Gunay Aytekin 810
Gunay Ulgen 810
Gupta A N 1021, 1025
Gupta B Ramesh 751
Gupta I D 1274
Gupta M K 405
Gupta Meenakshi 764
Gupta O P 136, 166
Gupta P K 944
Gupta P S P 886
Gupta R K 1170, 1183
Gupta R P 559
Gupta R S 584, 877
Gupta Samidha 349
Gupta V K 154, 269, 598, 899, 1001, 1008, 1015, 1279
Guraya S S 369
Gurung B S 1170, 1183
Hagh-Nazari J 271
Haque M E 501
Haragopal V 1054
Harbola P C 327
Harlikar M N 1147
Hati U K 518, 980
Hazary R C 1150
Honnegowda 490
Hooda O K 710
Hoque M 830, 828
Howlider M A R 501, 961
Ibrahim Z A 694
Inal F 194, 1250
Ingale N D 839
Ingle V C 149
Ingole S D 1147
Iype Sosamma 833
Jagannath M S 1057
Jain R K 434, 504, 521
Jain A 649
Jain J 823
Jain P K 1087, 1025
Jain R K 1021
Jain Rajiv 1268, 1272
Jain S K 399
Jain V K 1258
Jaishankar J 537
Jakhar K K 1157
Jakhmola R C 850
Jalaludeen A 656
Jasia Sandeep 488, 465
Jayachandran C 163
Jayachandran D 833
Jayakumar K 490
Jayasankar J 792
Jha H N 163
Jindal S R 813
Joardar S N 789
Johari D C 1150
Joseph Leo 656
Joshi D V 925
Joshi J D 535
K H Bijubala 1062
Kaankuka F G 740
Kachawaha R N 718, 947, 957
Kakade Krishna 161, 159
Kalatharan J 41
Kale M M 25, 30
Kale M M 936
Kalita A 248
Kalita N 35
Kalorey D R 149
Kalra Sunil 497
Kandasamy N 649, 691, 723
Kapoor K N 942
Kar B C 820
Karanjkar L M 1085
Karim S A 1180
Karim S A 616, 659, 854, 874, 494, 938, 988, 1266
Kasiraj R 251
Kataria J M 343, 346, 390, 556, 1125
Kataria R S 582
Kathiresan D 43, 254, 576, 679
Katiyar P K 1244
Katiyar P K 764
Katoch B S 298
Katoch R C 11,22, 269, 488, 598, 1131, 1134, 1279
Katoch S 209
Katoch V M 37, 701
Katock R C 465
Kaur Jagvinder 708
Kaushal D K 1094
Kaushish S K 431, 494, 530, 616
Khalil A B A 1210
Khan B U 294, 1069
Khan F A 792
Khan M H 14, 19
Khan M Z 176
Khan Massarat 118
Khan N R M Z 961

Khan S A 736
Khanagwa Poonam 619, 310
Khanna A S 728
Kharole M U 180
Khatkar M S 732
Khatta V K 1157
Khirwar S S 965
Khudrathulla Mohamed 1057
Kinjavdekar P 394, 828, 929, 1218
Kirmani M A 540
Kothekar M D 645
Krishnamurthy D 478
Krishnan K R 664
Krishnappa G 197, 267, 895
Krishnappa H 490
Kuamr P 604
Kuamr Sanjeev 604
Kulbhushan 473
Kulkarni M B 203
Kumar Jitender 180
Kumar K Ganesh 604
Kumar Naveen 136
Kumar Virender 471
Kumar A 736, 942
Kumar A A 235 , 240
Kumar Ashok 524, 68
Kumar B 1112
Kumar D 747, 82
Kumar Harendra 931
Kumar M 60, 307
Kumar N 830, 1157
Kumar Naveen 166, 169, 482
Kumar Parveen 178
Kumar Pushpendra 535
Kumar R V Suresh 1054
Kumar Rajesh 110
Kumar Rajiv 1131, 1134, 1279
Kumar Ram 985
Kumar S 1094
Kumar Sanjay 327
Kumar Sanjeet 180
Kumar Santosh 209
Kumar Saravana 80
Kumar Satish 169, 276, 482, 866
Kumar Umesh 983
Kumar V Ramesh Saravana 664
Kumar Vinay 246
Kumar Vinod 475
Kumari Meena 298
Kumari Nirmala 446
Kundu R L 857
Kuralkar S V 1163
Kurhe B P 281
Kurkure N V 149
Kushwah Ameeta 386
Kushwah H S 386
L H Rao 780, 780
Lakra W S 213
Latha Bhaskaran Ravi 921, 1221
Lodhi G N 756
M Gurnani 409
Maan Mansoor Maan 8
Maan N S 1157
Maan Sushila 3
Madan M L 403, 48, 933
Madhavi G 126, 129
Madhira S P 837
Mahajan Arvind 22, 465, 488, 1131, 1134
Mahakhode A G 1085
Mahanta S K 756
Mahaparta C T 1187
Mahapatra S K 974
Maiti N K 228, 813
Maiti S K 171, 276
Majumdar A C 688
Makhdoomi D M 478
Malik B S 559
Malik M R 121, 1049,1208, 1226
Malik P M 1108
Malik Praaveen 1108
Malik R C 146
Malik S 654
Malik Yashpal 3, 103
Mallikarjunaiah H D 283
Mandal A B 311, 619
Mandial R K 847
Manik R S 25
Mann Sushila 103
Manohar B Murali 921, 1136, 1221
Manuja N K 209, 63
Marai I F M 694, 1210
Marayanan K 43
Mathur A C 530
Mathur A K 1032
Mathur B K 431, 530
Mayahi Mansoor 39
Mazumdar Asha 974
Mazumder N K 974
Meenambigi T V 265
Mehmood A 139
Mehra U R 415
Mehta B S 96, 294, 537, 647
Mehta S C 423
Minakshi 3, 103
Mini M 261
Mir M Y 540
Mirakhur K K 356, 452, 458, 909, 1143
Mishra A 854

Mishra A K 251
Mishra A S 850, 874, 1180
Mishra B P 211, 54
Mishra J 1187, 1191
Mishra J P 343, 346, 390, 1125
Mishra N 443
Mishra O P 504
Mishra S 343, 346, 390, 443, 1125
Mishra S K 1112
Mishra S N 698
Mishra T K 1187, 1191
Mishra U K 504, 508
Misra S 556
Misra A K 1180
Misra A K 662, 850, 854, 868, 874, 938
Misra B S 184
Misra J P 181, 556, 530
Mogha I V 830
Mohan Andrew Chandra 1123
Mohapatra S C 1150
Mondal D B 56, 572
Mondal S K 533
Mor Suman 766
Mor Sumar 1141
Moudgal R P 58
Moulvi B A 586
Mtimuni J P 309
Mulei C M 897
Murtuza M 50, 52, 401, 664, 1172
Naayak Sujit 446
Nachimuthu K 225
Nagamalleswari Y 126, 129
Nagaracenkar R 75, 286
Nagare W K 203
Nagpal A K 968, 1261
Nagpal K B 22
Nagvekar A S 600, 1147
Naik Mansing K 1091
Nainar A Mahalinga 265
Nair T S 931
Nanda A S 452, 455
Nandi S 228, 486
Nangia O P 764
Narang Deepti 488
Narayana K 490
Nasir A 58
Natarajaseenivasan K 551
Nath N C 603, 843
Nayak P K 1187
Nayak P K 1191
Negi Arvind Singh 1244
Nema R K 521
Nikam T R 329
Nivsarkar A E 649
Nowar M S 694
Oberoi M S 813
Oduguwa O O 70
Ogunmodede B K 623
Oloyo R A 623
Onifade A S 70
Oroon B 405
Özkara R 1250
P Bhise Minal 213
P S P Gupta 777
Pachauri V C 756
Padhi M K 845
Padmanaban V D 225
Pal A K 596
Pal Anirban 820
Palia S 944
Palta P 486
Panda A K 311, 985
Pandey N M 572
Pandey N N 1052
Pandey R P 50, 52, 401
Pandey R S 316
Pandey Savita 1145
Pandey U K 1268, 1272
Pandit R K 279, 1145
Pandya P R 877
Panneerselvam S 691, 723
Pant H C 251
Pant K P 718, 957
Parihar N S 136, 157, 166
Parmar M L 121, 1049, 1208, 1226
Parnerkar S 877
Parsania R R 392
Parthiban M 265, 919, 1105, 1123, 1201
Patel A K 431, 530
Patel A M 837, 877
Patel B J 925
Patel J R 504
Pathak N N 1258
Pathodiya O P 613
Patil A D 281
Patil D B 392
Patra R C 258, 705
Pattanaik A K 736
Paul W Manohar 1123
Paul W Manohar 265
Pawaiya R V S 443
Pawar Ashok 142
Pawde A M 394, 1218
Phalak K R 281
Pirmohammadi R 91
Prabha B 50, 52, 401, 594
Prabhakar S 452, 455
Prabhakaran K B 656

Pradhan K 1261
Praharaj N K 311
Prakash K 197
Prakash N 142
Pramod Kumar D 126, 129
Prasad Gaya 103
Prasad Krishna 1074
Prasad R 850, 874
Prasad R L 596
Prasad R V 159, 161
Prasad Rajendra 1266
Prashad R K 591
Pratap K 828, 929
Pratap Tej 632
Punia B S 65
Punia J S 399
Purushothaman M R 1172
Pushpanjali 596
Raghvendar S 54
Raheja K L 497, 643, 1163
Rai A V 174
Rai R B 845
Raina R 475
Raj Hans 362
Rajagopal S 434, 504, 508, 521
Rajavelu G 815, 921, 1136, 1221
Ram G C 789, 1001, 1008, 1015
Rama Rao S V 311
Ramadass P 815, 1105, 1123
Ramadass P 919
Ramakrishna O 1054
Ramesha A N 159, 161
Ramkrishna V 142
Ramkrishna V 906
Rampal S 703
Randhawa S N S 847
Ranga Reddy N S 251
Rani S Isabella 526
Rao G V Sudhakar 759
Rao K N P 797, 823
Rao L H 886
Rao M K 608
Rao M Mutha 251
Rao Suguna 1233
Rao V D 110
Rao V Prabhakar 751
Raote Y V 1138
Rasool T J 716
Ratnam S 551
Ravi R 1172
Rawat P S 494, 616
Ray D 449
Ray J P 228
Razzaque M A 146
Reddy A Obi 608
Reddy C Eswara 751
Reddy G V N 188
Reddy H R V 1091
Reddy K Joji 188
Reddy M R 311
Reddy P P 751
Rekha B S 895
Risam K S 540
Rohilla P P 60, 307
Roy K S 567, 847
Roy A K 968
Roy K S 563, 801
S D Kharche 45, 46
S M K Naqvi 181
Sachan J K S 761
Sadhukhan Tapan Kumar 917
Sagar V 1242
Sah R L 1125
Saha S K 845
Sahana G 409, 649
Sahani M S 54, 211, 1261, 968
Sahni K L 33
Sahu D S 1074
Saigal R P 118
Saikia B N 319
Saini N 1261
Saini N S 356, 909
Saini S P S 1223
Saiyed L H 877
Sakhila Banu K 254
Sakhila K 576
Sakila K 679
Samad Mateen 667
Samanta A K 662, 868
Samanta S 904
Sandhu H S 708
Sandhu J S 732
Sangwa D C 1261
Sankhyan S K 938, 1266
Santra A 659, 850, 874, 988
Sanyal M K 628
Saran Sandeep 526
Saraswat B L 205, 207, 1236
Sarathi S K Vijaya 1233
Sareen Vijay Kumar 983
Sarkar M 56
Sarkar P 228
Sarma D K 35
Sarma D N 712
Sarma Kabita 1229, 1231
Sarma Kamal 1229, 1231
Sarmah B C 712
Saseendranath M R 261

Sastry K K V 1047
Sastry V R B 419, 991
Satyanarayana A 751
Satyanarayana M L 283, 1231
Saxena A 480
Saxena B C 1160
Selvaraju M 43
Sen A R 200, 659, 988
Senani S 845
Sengar O P S 1236
Sengupta B P 428
Sethi R K 428, 710, 769
Sethi R S 118
Setia H C 171
Shaikh A S 329
Shama M A K 1052
Shames N 797, 823
Shanker Uma 807
Sharma A K 136, 169, 394, 480, 482, 166
Sharma Arjava 912
Sharma B K 880
Sharma D K 243, 353
Sharma D N 1117, 246, 274, 473, 826, 923
Sharma Deepak 684
Sharma K 419, 991
Sharma K S 298
Sharma M B 369
Sharma M K 423
Sharma Mandeep 598, 1127
Sharma Neeta Raj 386
Sharma R K 369, 1035
Sharma S K 473, 1059
Sharma S N 243, 925
Sharma S S 1064
Sharma Satish 471
Sharma V D 37, 584, 701, 1108
Sharma V K 839, 862
Shekar C S 1233
Shinde A K 200, 938
Shivaraj D B 267
Shukla S K 110, 1129
Siddiqui M F 77
Sidhu N S 744, 302
Sindhu Sonia 764
Singh A 747
Singh A P 478, 662, 868
Singh A S 1258
Singh Avtar 304
Singh B 480
Singh B N 1187, 1191
Singh B P 84, 1108
Singh Bachchu 613
Singh C 48, 50, 52, 401, 403, 594, 933
Singh C S P 1167
Singh C V 82, 747
Singh D 701, 792
Singh D K 258, 1255, 1165, 1167
Singh G 60, 307
Singh G R 136, 166, 171, 362, 830, 1052, 1216
Singh Gaj Raj 276
Singh Gajender 728
Singh Geetanjali 298
Singh Gurmej 96, 537, 647
Singh H B 701
Singh H N 184
Singh Harpal 82
Singh Jit 586
Singh K K 526, 654
Singh Kamlesh 207
Singh Kishan 766, 1141
Singh L B 1253, 1165, 1167
Singh L P 468, 1067
Singh M 1081
Singh M 163, 1174, 1177
Singh M P 478
Singh Mohan 302, 744, 1170, 1183
Singh Mohinder 246, 473
Singh N 154, 231, 263, 492, 899, 914
Singh N P 200
Singh N S 1165, 1167, 1255
Singh Nanhar Balroop 243
Singh Nariender 1185, 325
Singh O P 205
Singh P 1258
Singh P P 899
Singh Parminder 974
Singh Parminder Jit 563
Singh Pawan 914
Singh R 157
Singh R A 526
Singh R K 604, 698, 944
Singh R V 747
Singh Rajender 325, 1185
Singh Rajvir 526
Singh Rakesh Pratap 1047
Singh S 1261
Singh S D 191
Singh S K 68, 75, 286, 405, 518, 524, 584, 817, 980, 1062
Singh S P 22, 279, 598, 925
Singh S V 154
Singh S V 178, 231, 263, 492, 899
Singh Sudarshan 983
Singh Sultan 764, 1246, 1261
Singh Surjeet 276
Singh U P 756, 1246
Singh Umesh 63, 1170, 1183
Singh V K 423, 947, 957
Singh Vir 632

Singhal K K 513
Sinha A P 518, 980
Sinha N K 1069
Sinha S P 163
Sirajudeen M 58
Sivaselvam S N 41
Sobti V K 567
Sohane R K 1081, 1174, 1177
Sood S B 263
Soundarajan C 815
Sreekumar E 716, 1204
Sreenath M 174
Sreenivas Gowda R N 283
Sreenivasulu D 151
Sreenu M 126, 129
Sriraman P K 1120
Srivastava A K 1059, 1223
Srivastava B B 543
Srivastava J P 518, 980
Srivastava J P 68
Srivastava S K 33, 114, 807
Subba Rao M V 151
Subramanian A 41
Sudhakar L S 274, 923
Sudheer S 804
Sujani G 1120
Sundararaman M N 652
Sunder Jai 235
Sunder Jai 240
Suresh T P 490
Suryawanshi S B 171
Suthar B N 839
Swarnkar C P 792
Swarup D 258
Tailor S P 73, 613
Taluja J S 121, 1206, 1226
Talvaelkar B A 1147
Talvelkar B A 600
Taneja V K 87, 89, 684
Tayal Rishi 586
Thakur D K 405, 1062
Thakur S 68, 524
Thakur Y P 84, 209
Thangamani R 664
Thangaraju P 652
Thiagarajan V 919, 1105, 1201
Thiruvenkadan A K 691, 723
Thomas P C 1276
Thore A D 645
Tiwari A K 582
Tiwari S P 434, 504, 508, 521
Tomar A K S 96, 294, 537, 647
Tomar S S 953
Tomer O S 25, 30
Toppo Saroj 415
Triveni Dutt 46
Turgut Leyla 322, 972
Tuzemen Naci 322, 972
Tyagi A K 938, 1160
Tyagi S 1032
Umakantha B 197
Umucalilar H D 1250
Unni A K K 656
Upadhyay R C 178
Uppal Varinder 801
Uppal R P 475
Uzman Mehmet 810
V V Deshmukh 340
Vadnere N B 600
Vadodaria V P 837
Vaish Rakhi 1049, 1226
Varghese Cini 862
Varshney A C 246, 473
Vasan P 1172
Vasanthakumar P 419, 991
Vashishtha S N 1242
Velmurugan R 225
Venkatachalapathy R Thirupathy 833
Venkatesan K 446
Venugopal V S 833
Verma Rishendra 37, 446
Verma Subhash 22, 269
Verma D 121
Verma D L 200
Verma G S 343, 346, 533, 556, 1125
Verma M L 1074
Verma N C 868, 662
Verma N K 1276
Verma Rishendra 701
Verma S V S 191
Vihan V S 263
Vijaya B 862
Vijayarani K 225
Vijayasarathi S K 283
Vinayak A K 497
Wadhwani K N 837, 877
Wani G M 176, 835
Wani N A 176, 835
Yadav Banamali 211
Yadav C L 1112
Yadav K D 163
Yadav P L 628
Yadav P S 710
Yadav S B S 73, 947, 957
Yadav Sunil 965
Yadava K P 133
Yamani K A O 694
Yanar Mete 322, 972, 977

Yuksel Sadrettin 322, 977
Zulkadir Ugur 977